

### ABSTRACT

A multi-stage circuit has a first stage and a second stage that both share a bootstrap module. More specifically, the first stage has an output switch, and the second stage has an input switch in communication with the output switch. The multi-stage circuit thus includes the bootstrap module in communication with both the output switch and the input switch. The bootstrap module is capable of applying a voltage to both the input and output switches, while the applied voltage ensures that the first and second switches remain in an on state at specified times.